

WHAT IS CLAIMED IS:

1. A joint prosthesis, comprising a head having multiple components for assembly with each other in-situ, each having an outward surface that cooperates with each other to enable articulation against an external surface, each having a formation configured to
5 cooperate with each other to effect mechanical connection that retains the multiple components in position relative to each other.

2. The joint prosthesis of claim 1, wherein the outward surfaces of the head are configured to articulate with a natural glenoid gravity.

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3. The joint prosthesis of claim 1, further comprising a stem having proximal and distal ends, the distal end having an elongated stem portion configured to fit within a canal of a bone, and the proximal end having a different shape than that of the distal end.

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4. The joint prosthesis of claim 3, wherein a portion of the distal of the stem has a surface texture suited to facilitate the fitting of the stem in the canal.

5. The joint prosthesis of claim 3, wherein the formation of at least one of the
20 components has a mating configuration to mate with a complementary mating configuration at the proximal end of the stem.

6. The joint prosthesis of claim 3, further comprising at least one platform positioned between the head and the stem, wherein the platform is configured to matingly engage the head and the stem.

5 7. The joint prosthesis of claim 6, wherein the platform is configured to be adjustable to change a distance between the head component and the stem component.

8. The joint prosthesis of claim 6, wherein the platform being configured to be
10 rotatable to adjust a position of the head component relative to the stem component.

9. The joint prosthesis of claim 1, wherein said head has at least one protrusion that is configured to engage a periphery of at least one corresponding cavity so as to block the protrusion from rotating within said corresponding cavity.

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10. The joint prosthesis of claim 1, wherein said head has multiple protrusions that are configured to fit simultaneously into one single cavity, the cavity having a periphery configured to block rotation of the multiple mechanisms within the cavity.

20 11. The joint prosthesis of claim 9, wherein said at least one protrusion constitutes multiple protrusions, and at least one cavity constitutes multiple cavities, each of the multiple protrusions being configured to fit into a corresponding one of the multiple cavities.

12. The joint prosthesis of claim 9, further comprising a securing means for retaining and leveling said multiple components into said cavity.

5 13. The joint prosthesis of claim 12, wherein the securing means is selected from a group consisting of a screw, a press-fit rod, and a rivet.

14. The joint prosthesis of claim 1, wherein the outward facing surface of each of the multiple components represents a portion of a continuous and smooth surface to ensure
10 continuous and smooth articulation.

15. The joint prosthesis of claim 14, wherein the outward surface of each of the multiple components together form a shape that is substantially hemispherical.

15 16. The joint prosthesis of claim 15, wherein the multiple components represent sections of said shape divided radially from each other.

17. The joint prosthesis of claim 16, further comprising gaps between every two adjacent sections.

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18. The joint prosthesis of claim 1, further comprising a retainer to retain the components in place relative to each other by engaging the formations.

19. The joint prosthesis of claim 18, wherein the formations include at least one cavity in which the retainer is inserted.

20. The joint prosthesis of claim 18, wherein the formations include at least one
5 peripheral configuration engaged by the retainer.

21. A method of assembling a joint prosthesis, comprising assembling multiple components of a head together wherein each component has an outward facing surface that cooperates with each other to enable articulation against an external surface, each
10 having a formation configured to effect mechanical connection to retain an associated one of the multiple components relative to other ones of the multiple components whose formations are mechanically connected.

22. The assembling method of claim 21, wherein the assembling is at least partially
15 carried out in-situ in a patient receiving an implantation of the joint prosthesis.

23. A method of articulating a joint prosthesis, comprising assembling multiple components of a head together wherein the multiple components being configured in that each component has an outward facing surface that cooperates with each other to
20 enable articulation against an external surface, and articulating the multiple outward facing surfaces against the external surface, each having a formation configured to effect mechanical connection to retain an associated one of the multiple components

relative to other ones of the multiple components whose formations are mechanically connected.